## JC17 Rec'd PCT/PTO 14 JUN 2005

- 1. (currently amended) A polyethylene composition with multimodal molecular mass distribution, which has a density in the range of from 0.949 to 0.955 g/cm³ at 23 °C-and, a MFI<sub>190/5</sub> in the range from 0.1 to 0.3 dg/min or a MFI<sub>190/21.6</sub> in the range of 4 to 6 dg/min, and which comprises from 38 to 45 % by weight of a low-molecular-mass ethylene homopolymer A[[,]]; from 30 to 40 % by weight of a high-molecular-mass copolymer B made from ethylene and from anothera first 1-olefin comonomer having from 4 to 8 carbon atoms[[,]]; and from 18 to 26 % by weight of an ultrahigh-molecular-mass ethylene copolymer C containing a second 1-olefin comonomer, wherein all of the percentage data are based on the total weight of the molding composition.
- 2. (currently amended) AThe polyethylene composition as claimed in claim 1, wherein the high molecular mass copolymer B contains small proportions first 1-olefin comonomer is present in an amount of from 0.1 to 0.2 % by weight of co-monomer having from 4 to 8 carbon atoms, based on the weight of copolymer B, and wherein the ultrahigh molecular mass ethylene copolymer C contains an amount in the range the second 1-olefin comonomer is present from 2 to 3 % by weight of co-monomers, based on the weight of copolymer C.
- (currently amended) A<u>The</u> polyethylene composition as claimed in claim 1-or 2, which, as co-monomer, contains wherein the first 1-olefin and second 1-olefin comonomers are independently selected from 1-butene, 1-pentene, 1-hexene, 1-octene, 4-methyl-1-pentene, or a mixture of these.
- 4. (currently amended) A<u>The</u> polyethylene composition as claimed in one or more of claims 1 to 3 claim 1, which has a viscosity number VN<sub>tot</sub> in the range of from 460 to 500 cm<sup>3</sup>/g measured to ISO/R 1191 in decalin at 135 °C.
- 5. (currently amended) A<u>The</u> polyethylene composition as claimed in one or more of claims 1 to 4claim 1, which has a swell ratio index in the range of from 175 to 205 %, and a

- notched impact strength (ISO) in the range of from 30 to 60 kJ/m<sup>2</sup>, and a stress-crack resistance (FNCT) in the range of from 60 to 110 h.
- (currently amended) A process for producing a polyethylene composition as claimed in 6. one or more of claims 1 to 5 with multimodal molecular mass distribution, which has a density in the range of from 0.949 to 0.955 g/cm<sup>3</sup> at 23 °C, a MFI<sub>190/5</sub> in the range from 0.1 to 0.3 dg/min or a MFI<sub>190/21.6</sub> in the range of 4 to 6 dg/min, and which comprises from 38 to 45 % by weight of a low-molecular-mass ethylene homopolymer A; from 30 to 40 % by weight of a high-molecular-mass copolymer B made from ethylene and a first 1-olefin comonomer having from 4 to 8 carbon atoms; and from 18 to 26 % by weight of an ultrahigh-molecular-mass ethylene copolymer C containing a second 1-olefin comonomer, wherein all of the percentage data are based on the total weight of the molding composition, in which wherein the monomers are polymerized in slurry in a temperature range of from 60 to 90 °C at a pressure in the range of from 0.15 to 1 MPa, and in the presence of a high-mileage Ziegler catalyst composed of a transition metal compound and of an organoaluminum compound, which comprises the process comprising conducting polymerization in three stages, where the molecular mass of the polyethylene prepared in each stage is regulated with the aid of hydrogen, thereby forming a hydrogen concentration in each stage.
- 7. (currently amended) A<u>The</u> process as claimed in claim 6, wherein the hydrogen concentration in the first polymerization stage is adjusted so that thea viscosity number VN<sub>1</sub> of the low-molecular-weight polyethylenemass ethylene homopolymer A is in the range of from 160 to 220 cm<sup>3</sup>/g.
- 8. (currently amended) A<u>The</u> process as claimed in claim 6-or-7, wherein the hydrogen concentration in the second polymerization stage is adjusted so that thea viscosity number VN<sub>2</sub> of thea mixture of polymer A and polymer B is in the range of from 250 to 300 cm<sup>3</sup>/g.
- 9. A<u>The</u> process as claimed in any of claims 6 to 8claim 6, wherein the hydrogen concentration in the third polymerization stage is adjusted so that thea viscosity number

 $VN_3$  of thea mixture of polymer A, polymer B, and polymer C is in the range of from 460 to 500 cm<sup>3</sup>/g.

- 10. (currently amended) The use A process for producing a container having a capacity in a range from 10 to 150 dm³ (l) from of a polyethylene composition with multimodal molecular mass distribution, which has a density in the range of from 0.949 to 0.955 g/cm³ at 23 °C, a MFI<sub>190/5</sub> in the range from 0.1 to 0.3 dg/min or a MFI<sub>190/21.6</sub> in the range of 4 to 6 dg/min, and which comprises from 38 to 45 % by weight of a low-molecular-mass ethylene homopolymer A; from 30 to 40 % by weight of a high-molecular-mass copolymer B made from ethylene and a first 1-olefin comonomer having from 4 to 8 carbon atoms; and from 18 to 26 % by weight of an ultrahigh-molecular-mass ethylene copolymer C containing a second 1-olefin comonomer, wherein all of the percentage data are based on the total weight of the molding composition as claimed in one or more of claims 1 to 5 for producing large blow moldings, such as containers, with a capacity in the range of from 10 to 150 dm³ (l), wherein the polyethylene molding composition is first plasticized, the process comprising:
  - (a) <u>plasticizing the polyethylene composition</u> in an extruder in a temperature range of from 200 to 250 °C; and is then extruded
  - (b) extruding the product of step (a) through a die into a blow mold[[,]]; where it is blown up and then cooled and solidified
  - (c) blowing up the product of step (b) in a blow molding apparatus, thereby forming the container; and
  - (d) solidifying the container by cooling.